

CLAIMS

1. A method of correcting pixel values for output on a video display utilizing gamma correction, comprising:
 - 5 determining a first range of pixel values to be displayed on the video display;
 - determining a second range of pixel values to be displayed on the video display;
 - providing a first level of gamma correction to the first range of pixel values at a
 - 10 first level of precision;
 - providing a second level of gamma correction to the second range of pixel values at a second level of precision, different than the first level of precision.
2. The method of correcting pixel values for output in accordance with claim 1 wherein the step of providing a first gamma correction includes the step of
- 15 providing a unique correction value for each pixel within the first range of pixel values.
3. The method of correcting pixel values for output in accordance with claim 1 wherein the step of providing a second level of gamma correction includes the step of utilizing a gamma correction value for at least two pixel values within the
- 20 second range of pixel values.
4. The method of correcting pixel values for output in accordance with claim 1 further comprising outputting the gamma corrected pixel values of both the first range and the second range to a video display for display.
5. The method of correcting pixel values for output as claimed in claim 4
- 25 also comprising converting the outputted gamma corrected pixel values from a digital value to an analog signal for display on the video display.
6. A method of correcting pixel values for output in accordance with claim 1 wherein the step of determining a first range of pixel values includes selecting a first range of pixel values within a low light level of input pixel values.
- 30 7. A method of correcting pixel values for output in accordance with claim 1 wherein the step of determining a second range of pixel values comprises selecting a range of pixel values outside a low light level value of pixel values.
8. A method of correcting pixel values for output in accordance with claim 1 wherein the first level of precision is greater than the second level of precision.

9. A video processor comprising:

a video signal processor;

a digital to analog converter;

a gamma correction device, coupled to the video signal processor and the digital

5 to analog converter;

a first gamma look up table, coupled to the gamma correction device, the first

gamma look up table programmed to provide a first level of gamma

correction to a first range of pixel values at a first level of precision; and

a second gamma look up table, coupled to the gamma correction device, the

10 second gamma look up table programmed to provide a second level of
gamma correction to a second range of pixel values at a second level of
precision, different than the first level of precision.

10. The video processor of claim 9 wherein the first gamma correction look
up table provides a unique correction value for each pixel value within the first
15 range of pixel values.

11. The video processor of claim 9 wherein the second gamma correction
look up table provides a gamma correction value for at least two pixel values
within the second range of pixel values.

12. The video processor of claim 9 further comprising a video display,
20 coupled to the digital to analog converter, wherein the gamma corrected pixel
values of both the first range and the second range are sent to the video display
for display.

13. The video processor of claim 12 wherein the digital to analog converter
converts the outputted gamma corrected pixel values from a digital value to an
25 analog signal for display on the video display.

14. The video processor of claim 9 wherein the first range of pixel values
includes those pixel values within a low light level of input pixel values.

15. The video processor of claim 14 wherein the second range of pixel values
includes those pixel values outside a low light level value of pixel values.

30 16. The video processor of claim 9 wherein the first level of precision is
greater than the second level of precision.

17. A video processor comprising:

a video signal processor;

a digital to analog converter;

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a gamma correction device, coupled to the video signal processor and the digital to analog converter;

a gamma look up table, coupled to the gamma correction device, to provide a first level of gamma correction to a first range of pixel values at a first level of precision and a second level of gamma correction to a second range of pixel values at a second level of precision, different than the first level of precision.

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18. The video processor of claim 17 wherein the first level of gamma correction provides a unique correction value for each pixel value within the first range of pixel values.

19. The video processor of claim 17 wherein the second level of gamma correction provides a gamma correction value for at least two pixel values within the second range of pixel values.

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20. The video processor of claim 17 further comprising a video display, coupled to the digital to analog converter, wherein the gamma corrected pixel values of both the first range and the second range are sent to the video display for display.

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21. The video processor of claim 20 wherein the digital to analog converter converts the outputted gamma corrected pixel values from a digital value to an analog signal for display on the video display.

22. The video processor of claim 17 wherein the first range of pixel values includes those pixel values within a low light level of input pixel values.

23. The video processor of claim 22 wherein the second range of pixel values includes those pixel values outside a low light level value of pixel values.

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24. The video processor of claim 17 wherein the first level of precision is greater than the second level of precision.

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